PLANNING AHEAD

Notes for the Planning Community

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Notes from Jim Johnson

As many of you know, this is not the most enjoyable of times for us. There are almost daily accounts in the news media involving the Corps and our projects, much of which is harsh, exaggerated and unjustified. Unfortunately, battle lines are being drawn between our different constituencies, at a time when we all should be committed to working together. In some instances, groups whose interests conflict with each other attack our process when our analyses don't support the results they want. Unfortunately, many of our critics do not have a good understanding of our planning and review processes, or how fundamentally sound they are. Hopefully, that will change.

On April 22, we completed the revision of our planning guidance, ER 1105-2-100, and it will be available soon for all to see on the Corps website. This has not been as easy a task as we envisioned when we began this revision over fifteen months ago. While the document still adheres strictly to the ***Principles and Guidelines***, as it has for nearly two decades, its format and presentation have changed substantially. Detailed technical procedures are unchanged, but they have been relocated to the document's appendices.

All essential guidance is contained in the 80-page main document of ER 1105-2-100. Everyone involved in our planning process should read the main document of this regulation. Its intent is to clarify what we can plan and implement, as well as the process for getting there. Along with sound and understandable planning guidance, we also must maintain the quality of our products through technical and policy reviews. We will continue to take all measures necessary to assure the quality and sufficiency of those reviews, so that we continue to properly formulate and evaluate sound water resources plans. 🕮

Senior Planning Vacancies

We have created this special section in *Planning Ahead* to highlight vacancy announcements for senior planning positions, especially planning chief positions. We encourage all divisions and districts to place senior planner position announcements in *Planning Ahead* to give them greater visibility. Also you can find most vacancy announcements at http://cpol.army.mil/va/scripts/public.html

Seattle District

Summer Plan Formulation Opportunity in Seattle: This summer a great opportunity exists in Seattle District: an immediate two to four month assignment for a person with extensive experience in flood damage reduction plan formulation to work on an exciting project in a unique partnership with a local sponsor. The initial detail would last 60 days with a possible extension to 120 days. Promotion of the current GS-12 planner has created an immediate need for a temporary replacement until a permanent replacement can be selected. For an experienced person, this is an opportunity to spend a summer in the beautiful city of Seattle and gain experience with an innovative approach to project development.

The Centralia, Washington project, authorized in WRDA 1986, includes the modification of an existing, private water supply dam to provide flood storage. In addition, the local sponsor has proposed major flood plain modifications and flood bypass elements to the authorized project with a potential total cost of $80 million. The $16 million PED effort is developing alternatives and evaluating a major reformulation of the authorized project. Alternatives must be developed and evaluated this summer so that detailed studies on selected alternatives can be completed in time for inclusion in a General Reevaluation Report and Environmental Impact Statement supporting project modification in WRDA 2002.

If you are interested in this exciting opportunity, please contact Mona King, Ch., Planning Branch or Bruce Sexauer for more information.

Items of Note - On the Web

Ellen Cummings - CECW-PD

You can click on http://www.usace.army.mil/inet/usace-docs/ to get to the main page and then the "What's New" link to keep track of the new publications. Recent publications of note:

- A new Engineering Manual has just been issued regarding the "Civil Works Construction Cost Index System (CWCCIS). The purpose of the manual is to provide historical and forecasted cost indexes for use in escalating civil works project costs. It may be found at http://www.usace.army.mil/inet/usace-docs/eng-manuals/em1110-2-1304/toc.htm

- Some of you may not be aware that the Legislative Initiatives Branch of Policy uses an electronic mailing list to distribute items of interest. To subscribe send an e-mail to: majordomo@usace.army.mil. The subject line must be blank and the text should read: subscribe ls-policy@usace.army.mil. Two recent items included web addresses for accessing information regarding WRDA 2000 and testimony from various authorization and appropriations hearings. The address for WRDA 2000 information is: http://www.usace.army.mil/inet/functions/cw/cecwa/branches/legislative/index.htm at the following

heading: WATER RESOURCES DEVELOPMENT ACT (WRDA) - This provides information on the process of the bill and links to testimony and the bill language. Another way to access recent testimony is by using the following:
http://www.usace.army.mil/inet/functions/cw/cecwa/branches/legislative/testimon.htm
where you can read the written statements presented to Congressional committees. Testimony on Great Lakes Sediment Remediation, Actions Affection Hydropower Operation on the Columbia River System and the Abandoned Mine Restoration Act are among the topics covered.

Using Geographic Data for Reconnaissance Studies - Not as expensive as you might think

Nancy Blyler, CECW-EP

One of the first steps in a reconnaissance study is to become familiar with the region. Where are the environmentally sensitive, residential, and toxic areas in a region? What is their placement in reference to the water supply? Geographic Information Systems (GIS) can easily allow you to find this information quickly and inexpensively… yes, inexpensively. Many Federal Agencies are using the Internet and CD-ROM technology to view and distribute their data. The resolution of these data is often too coarse for detailed studies; however, it is adequate for a quick and inexpensive way to identify environmental hazards, demographic data, wetland information and much more for regional analysis.

The Digital Project Notebook (DPN) (http://crunch.tec.army.mil/dpn/webpages/dpn.cfm)

The DPN combines historical project information from all the Civil Works Districts into a single database/map-set, with accompanying information sheets, and is currently available on the Internet. Understanding historical and ongoing Corps projects in an area, is a good first step to a reconnaissance study that can be accomplished with the DPN in an afternoon. The DPN provides easy access to projects financial data, geographic extents, authorization information, current pictures, and diagrams.

The National Atlas (http://www.nationalatlas.gov)

The U.S. Geological Survey and its partners began work on The National Atlas of the United States of America in 1997. The National Atlas is designed to promote greater geographic awareness through the development and delivery of products that provide easy to use, map-like views of our natural and socio-cultural landscapes. The participation of many agencies of the federal government has been crucial to the successful early development of the National Atlas. Congress recognized that no single government agency could deliver an atlas that is truly national in scope and breadth when it assigned the USGS to direct the project. That's why so many producers of reliable and authoritative geographic information have joined the USGS in developing National Atlas products.

The National Atlas of 1970 included 819 maps that were compiled over a period of seven years. Currently, there are 131 map layers (another 178 map layers are in development) offered to the public through the Web-based interactive National Atlas which went online in April of 1998. Nearly all of these data can be viewed over the web or are available to download for use with a desktop GIS. Although, all the map layers were compiled at a scale of 1:2,000,000 or 1:2,500,000 and are not suitable for detailed planning studies, the site location databases provide unique insight to the regions; such as, abandoned coal mines and superfund sites, which can be used to identify potential problems in the area.

LandView III (http://www.census.gov/geo/www/tiger/landview.html)

LandView ®III is a desktop mapping system that includes database extracts from the Environmental Protection Agency, the Bureau of the Census, The U.S. Geological Survey, the Nuclear Regulatory Commission, the Department of Transportation, and the Federal Emergency Management Agency. These databases are presented in a geographic context on maps that show jurisdictional boundaries, detailed networks of roads, rivers, and railroads, census block group and tract polygons, schools, hospitals, churches, cemeteries, airports, dams, and other landmark features. The data was compiled using a variety of sources at various scales – primarily, USGS 1:100,000 and 1:24,000. Currently, the geospatial data can not be easily extracted from the LandView software. LandView III CD can be obtained from the Commerce Department for $99 per disc or $549 for 11-disc set, which covers the United States.

NSDI Clearinghouse (http://www.fgdc.gov)

The Clearinghouse Activity, sponsored by the Federal Geographic Data Committee (FGDC), is a decentralized system of servers located on the Internet. A fundamental goal of Clearinghouse is to provide access to digital spatial data through metadata, standardized information describing the data set. The Clearinghouse functions as a detailed catalog service with support for links to spatial data and browse graphics. Through this model, Clearinghouse metadata provides low-cost advertising for providers of spatial data, both non-commercial and commercial, to potential customers via the Internet. All geospatial data on Clearinghouse sites must have documentation explaining the accuracy and quality for potential users to determine whether the data meets their needs. Currently, there are 183 NSDI Clearinghouse sites (USACE being one) that can be searched for existing geospatial data.

As Federal Agencies use Internet technology to distribute geospatial data, many more efforts like the ones described above will be established. For more information on how to use geospatial data for your project, contact your Division/District GD&S POC:
(http://crrel43.crrel.usace.army.mil:8080/wwwprod/plsql/gds.searchform). 🕮

CADD/GIS Technology Symposium and Exposition 2000

Nancy Blyler, CECW-EP

The CADD/GIS Technology Center for Facilities, Infrastructure, and Environment is pleased to announce its triennial Symposium and Exposition. ***Symposium 2000*** represents the fourth Center-sponsored gathering of CADD, GIS, and facility management users from the Federal government community. The last meeting drew over 1,200 attendees. Reflecting changes in the mission of the Center, Symposium 2000 will be sponsored by 12 Federal agencies. With over 100 exhibition booths highlighting the latest technology and achievements in CADD, GIS, facility management, remote sensing, hydrographic surveying, and mapping this Symposium is guaranteed to surpass all others. The Symposium will be held at the Adam's Mark Hotel in St. Louis, Missouri, May 23-25, 2000. Registration for attendance or exhibit booth reservations can be made at the Center's web site at http://tsc.wes.army.mil/. 🕮

Corps of Engineers Dredging Information

Ginny Pankow CEWRC-NDC

The Dredging Information System (DIS), a national database of U.S. Army Corps of Engineers dredging activity, has a data file available on the Navigation Data Center (NDC) homepage of all FY 1990 to FY 1999 dredging contracts awarded. The file contains information on the dredging location, quantity, cost, contractor, type of dredge used and category of material disposal. An accompanying data dictionary describes the fields and their characteristics. The file is available in comma delimited (.txt) and dbase (.dbf) formats. A separate file of FY 1995 to FY 1999 information for all Corps owned dredges will be available in early June. The data are on the Internet at http://www.wrsc.usace.army.mil/ndc/datadrg.htm and will be included on the new release of the Navigation Data Center data CD later this Spring. Custom queries are available on request; please contact Ginny Pankow at 703-428-9047. 🕮

Geographic Information Systems (GIS) in Planning Analysis: Application of HEC-GeoRAS to the Tres Rios, Arizona Feasibility Study

Cameron T. Ackerman and Michael Burnham, Hydrologic Engineering Center

Impacts of ecosystem restoration alternatives and the associated affects of flood impacts for the Tres Rios study area, located near Phoenix, AZ, were studied using the Hydrologic Engineering Center River Analysis System (HEC-RAS) in concert with HEC-GeoRAS. HEC-GeoRAS is a set of procedures, tools, and utilities for processing geographic information systems (GIS) data in ArcView GIS, using a graphical user interface. The interface allows preparation of geometric data for import into HEC-RAS and generation of GIS data from exported HEC-RAS simulation results. Automated GIS processing procedures in HEC-GeoRAS provides a valuable and expeditious method for repetitive hydraulic model development during floodplain analysis. Further, the GIS is ideally suited for visualizing proposed alternatives and the associated flood impacts.

HEC-GeoRAS Version 3.0 was used to extract cross-sectional data from a digital elevation model (DTM) represented by a triangulated irregular network (TIN). The geometric data written an ASCII file in a data exchange format developed by HEC was imported in HEC-RAS Version 3.0. In addition to other geometric data, HEC-GeoRAS was used to extract Manning's *n* values from land use data and levee alignments. The automated procedures for extracting geometric data proved consistent and efficient for the development of floodplain models to evaluate wetland scenarios and levee alignments.

The resultant water surface elevations exported from HEC-RAS simulations were processed by HEC-GeoRAS for floodplain delineation and water depth calculations. Analysis of cross-sectional velocities exported from HEC-RAS was also performed using HEC-GeoRAS. GIS data generated was used to identify and visualize potential impacts to the constructed wetlands and induced flooding to the adjacent floodplain. A comparison of floodplains delineated for the existing condition scenario and the with-project conditions is shown in Figure 1. The impact of wetland restoration on floodplain velocities is shown in Figure 2.

Benefits of using HEC-GeoRAS were first realized during hydraulic model development for various planning scenarios. Automated procedures for creating geometric data sets and processing

simulation results greatly facilitated analysis. However, the ability to visualize proposed scenarios and the impact to the floodplain proved valuable for promoting discussion between various stakeholders involved with the ecosystem restoration and flood control efforts. Biologists, economists, engineers, planners, ecologists, and community members were able to meet and discuss issues on visual displays of GIS data.

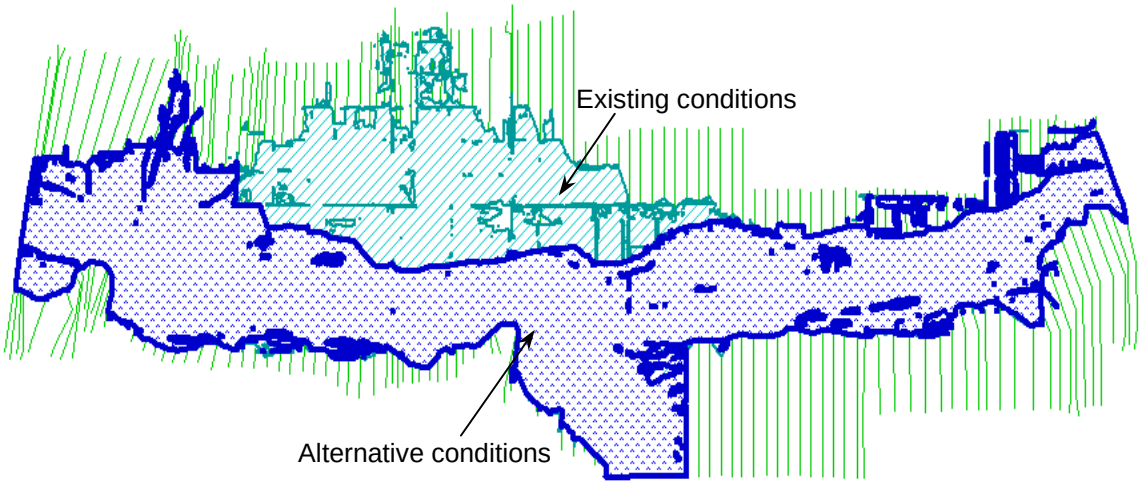

Figure 1. Comparison of floodplains delineated using GeoRAS.

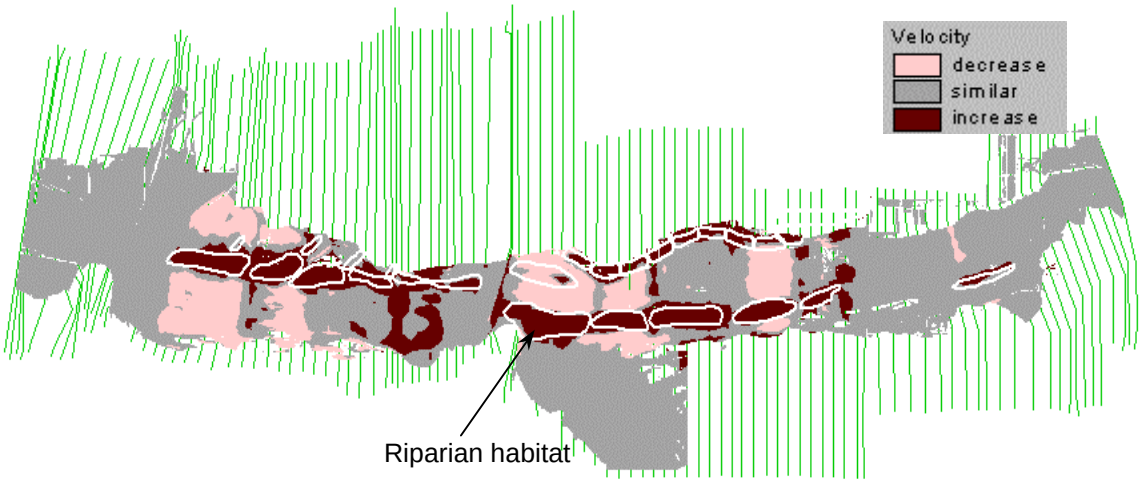

Figure 2. Impact on floodplain velocities for the alternative conditions.

Ecosystem Restoration Partnering in Massachusetts

Bill Hubbard, NAE

On June 4, 1994 federal and state officials, including Dr. Ed Dickey, then Acting Assistant Secretary of the Army for Civil Works, met on top of Sagamore Hill in Bourne and Sandwich, Massachusetts to adopt the *Resolution to Restore Massachusetts Wetlands*, a Coastal America Partnership Agreement representing a commitment of federal agencies to support state wetland restoration efforts. That event also launched the first major restoration project under the state's new Wetlands Restoration & Banking Program (WRBP) at Sagamore Marsh. Since 1994, the Massachusetts WRBP has supported over 100 potential wetland restoration projects, including Corps Section 22, 206 and 1135 projects (and potentially a scheduled FY-01 GI Reconnaissance). Projects completed or about to be completed have restored almost 200 acres of wetlands. Projects representing another 700 acres of restored wetlands are under development. Under the *Resolution*, over $3 million may be spent by federal agencies on restoration in Massachusetts to the state's expenditure of $1 million.

A track record of successful restorations implemented by multi-interest partnerships has attracted the support of the Massachusetts business community led by the Gillette Company, and launched the Massachusetts Corporate Wetlands Restoration Partnership. This Corporate Wetlands Restoration Partnership is under development as a national effort using the highly successful Massachusetts model.

Six years following the Coastal America kick-off event, on April 10, 2000 there was a "shovels in the ground" ceremony celebrating the ground breaking of the Sagamore Marsh Section 1135 project and six years of success including: establishment of an effective state wetlands restoration program, significant local support and involvement, a high level of federal support through Coastal America, and active participation by the corporate community. With a significant donation from the Gillette Company to support academia in an innovative post-construction monitoring program at the restored Sagamore Marsh, this project represents the many benefits a public-private partnership has to offer.

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The web site for additional information is: http://eml01.usace.army.mil/other/listserv.html

Submissions Deadline

The deadline for material for the next issue is **25 May 2000**

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